

Hand-Held Fluid Analyzer

Abstract

A hand-held device detects the presence of a preselected substance in the breath. A deformable housing forms a test chamber for interacting an indicator reagent with the breath. An ampoule positioned inside the housing is ruptured by manual pressure through the walls of the housing. The contents of the ruptured ampoule are exposed to the breath introduced into the chamber. The presence of a substance in the breath causes the indicator reagent to undergo a visually ascertainable change. The ampoule is secured within the housing by a pair of filter plugs having in-board concavities to receive the rounded ends of the ampoule to center it within the housing, and plural detents prevent slippage of the filters. Additional embodiments lower the user's risk of being cut by glass shards, prevent reagent inhalation, enhance the visual aspects of the device, and physically indicate the presence of breath flowing through the device.